

## IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

We claim as our invention:

1. (currently amended) A culturing device comprising:
  - ~~a at least one~~ culture container adapted to receive and to discharge a culture medium;
  - a porous cell culture insert removably received and providing a horizontal culture surface within the ~~at least one~~ culture container;
  - ~~a at least one~~ supply mechanism for introducing the culture medium into the ~~at least one~~ culture container and for discharging the culture medium from the ~~at least one~~ culture container; and
  - ~~a at least one~~ level sensor cooperating with the ~~at least one~~ culture container to sense a level of the culture medium for the ~~at least one~~ culture container, wherein the sensor controls the supply mechanism as a function of an output signal of the level sensor representing the level of the culture medium such that the device can achieve both a sustained submerged culture medium supply condition can be achieved by the device, and that a and a sustained basal culture medium supply condition, wherein said sustained basal culture medium supply condition allows for exposure of can be achieved by the device allowing that the cultured cells on said cell culture insert can homogeneously be exposed to gases, aerosols and particulate matter from above and culture medium from below through the porous cell culture insert.
2. (canceled)
3. (currently amended) A culturing device as defined in claim 1, further comprising ~~a at least one~~ pair of discharge lines in fluid communication with the ~~at least one~~ culture container.
4. (currently amended) A culturing device as defined in claim 31, wherein there are the at least one culture container comprises a plurality of culture containers, and wherein each pair of the discharge lines is associated with a respective one of the culture containers each culture container is associated with a pair of discharge lines.

5. (currently amended) A culturing device as defined in claim 34, wherein ~~the at least one culture container comprises a plurality of culture containers, and wherein~~ at least one pair of the discharge lines is associated with more than one of the individual culture containers.

6. (currently amended) A culturing device as defined in claim 1, wherein there are the at least one culture container comprises a plurality of culture containers, and wherein the plurality of culture containers are positioned so that a the horizontal culture surfaces ~~surface defined by the corresponding cell cultures lie in a common horizontal plane.~~

7. (currently amended) A culturing device as defined in claim 1, wherein there are the at least one culture container comprises a plurality of culture containers, and wherein each of the plurality of culture container containers is connected to a common culture medium supply line.

8. (currently amended) A culturing device as defined in claim 7, wherein a culture medium supply line is connected to ~~the~~ at least one culture container and communicates with a riser on which ~~the~~ at least one level sensor is carried.

9. (currently amended) A culturing device as defined in claim 8, wherein ~~the at least one~~ level sensor is vertically adjustable relative to the riser.

10. (currently amended) A culturing device as defined in claim 1, wherein ~~the at least one~~ level sensor comprises a plurality of level sensors, and wherein at least one ~~of the plurality of level sensor sensors~~ includes a forked photoelectric barrier.

11. (previously amended) A culturing device as defined in claim 10, wherein at least one of the level sensors continuously measures the culture medium level.

12. (currently amended) A culturing device as defines in claim 1, wherein there are the at least one level sensor comprises a plurality of level sensors, and wherein at least one of the plurality of level sensor sensors includes a level switch that responds to a predetermined target level.

13. (currently amended) A culturing device as defined in claim 1, further comprising:

a plurality of culture containers

an exterior housing;

a plurality of discrete modules within the housing such that there is a culture container within each module

~~a plurality of discrete modules within the housing wherein at least one of the at least one culture container is arranged within each of the modules; and~~

C a culture medium supply distribution system in fluid communication with a common culture medium supply line and with each of the modules.

14. (currently amended) A culturing device as defined in claim 13, wherein the supply distribution system has a single connection in fluid communication with the ~~at least one~~ supply mechanism, and wherein the single connection is disposed at a lowermost elevation of the supply distribution system.

15. (original) A culturing device as defined in claim 13, wherein the exterior housing has a plurality of separate connectors each coupled to a withdrawal line of a respective one of the discrete modules.

16. (currently amended) A culturing device as defined in claim 13, wherein each of the discrete modules includes a discrete temperature-control housing surrounding each the ~~at least one of the at least one~~ culture container within the corresponding discrete module, and wherein each temperature-control housing has a temperature-control medium inlet and a temperature-control medium discharge.

17. (original) A culturing device as defined in claim 16, wherein each temperature-control medium discharge is in fluid communication with an overflow apparatus lying in an upper region of the respective temperature-control housing, and wherein the overflow apparatus is positioned diametrically opposite to the temperature-control medium inlet within the respective temperature-control housing.

18. (original) A culturing device as defined in claim 17, wherein the temperature control medium inlet and discharge of the temperature-control housing of each of the discrete modules is connected in series relative to a flow path of the temperature-control medium.

19. (currently amended) A culturing device as defined in claim 1, wherein the ~~at least one~~ culture container is disposed within an exterior housing that can provide a sealed environment within an interior of the housing.

C 20. (currently amended) A culturing device as defined in claim 19, wherein the outer housing has a ~~at least one~~ connection for introducing a gaseous medium into the interior of the housing.

21. (original) A culturing device as described in claim 1, wherein certain components of the culturing device that must be sterilized are fabricated from materials that can withstand sterilization.

22. (currently amended) A culturing device as defined in claim 21, wherein the sterilizable materials are selected from a group consisting ~~comprising at least one~~ of glass and silicone.

23. (original) A culturing device as defined in claim 1, wherein the supply mechanism includes a bidirectional pump.

24. (original) A culturing device as described in claim 23, wherein the bidirectional pump is a peristaltic pump.

25. (currently amended) A culturing device as defined in claim 1, wherein there is ~~the at least one level sensor comprises~~ a pair of level sensors wherein one of the sensors controls the supply mechanism for the submerged supply condition and the other ~~of the sensors~~ sensor controls the supply mechanism for the basal supply condition.

26. (original) A culturing device as defined in claim 1, further comprising:  
a programmable controller that can control a culture medium target level transducer in a time-dependent manner.

27. (currently amended) A culturing device as defined in claim 26, wherein the programmable controller can adjust a target level value periodically between at least two level values, a first level value corresponding to a liquid level that is a predetermined distance above a top side of a culture surface of the cell culture insert in the ~~at least one~~ culture container, and a second level value corresponding to a liquid level that is a predetermined distance below the first level.

28-31. (canceled)

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32. (currently amended) A culturing device comprising:  
a plurality of culture containers adapted to receive and to discharge a culture medium;  
porous cell culture inserts, one for each of the plurality of culture containers,  
removably received within the culture containers, said the cell culture inserts each providing  
a horizontal culture surface wherein the plurality of culture containers are positioned so that  
the horizontal culture surfaces ~~surface provided by each of the culture containers~~ lie in a  
common horizontal plane;

a ~~at least one~~ supply mechanism for introducing the culture medium into the plurality  
of culture containers and for discharging the culture medium from the plurality of culture  
containers, and;

wherein a common culture medium supply line connected to the plurality of culture  
containers communicates with a riser on which at least one level sensor which is vertically  
adjustable relative to said riser is carried to sense a level of the culture medium for the  
plurality of culture containers, ~~and~~ wherein the sensor controls the supply mechanism as a  
function of an output signal of the level sensor representing the level of the culture medium  
such that the device can achieve both a sustained submerged culture medium supply  
condition and a sustained basal culture medium supply condition, wherein said sustained  
basal culture medium supply condition allows for exposure of ~~can both be achieved by the~~  
~~device, the basal control medium allowing that the cultured cells on said cell culture insert~~  
~~can homogeneously be exposed to gases, aerosols and particulate matter~~ from above and  
culture medium from below through the porous cell culture insert.